

Art Unit: 3600

Clmpto MH 09/14/1992

1 1. (amended) A sea surface antenna comprising a  
2 tube of metallic material, the tube having a substantially  
3 longitudinal slot coupled at [or near] its midpoint to a  
4 feed line, the slot being bridged by two pluralities of  
5 [capacitances] varactor diodes to either side of the feed-  
6 point, each plurality being distributed along a respective  
7 part of the slot, the antenna being dimensioned so as to  
8 operate in an evanescent mode at a resonant frequency less

2. An antenna according to claim 1 wherein the slot is shorted at each end.

3. (amended) A sea surface antenna comprising a tube of metallic material on a dielectric former, the tube having a longitudinal slot coupled at [or near] its midpoint to a feed line, the slot being bridged by two pluralities of [capacitances] varactor diodes to either side of the feed-point, each plurality being distributed along a respective part of the slot, the length of the antenna being less than  $0.25 \lambda$  and the diameter of the antenna being less than  $0.02 \lambda$ , where  $\lambda$  is the free space wavelength at the operating frequency, the antenna being dimensioned so as to operate in an evanescent mode at a resonant frequency less than the cut-off frequency, the antenna being provided with means for applying a variable bias to the varactor diodes.

4. An antenna according to claim 2 wherein the slot is shorted at each end.

Claim 5 Cancelled

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6. A sea surface antenna arrangement including two or more like antennas according to claim <sup>3</sup>~~7~~ placed in a colinear configuration and connected electrically in parallel.

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